

PG/Comp. Sc./3rd Sem/21(CBCS)

2021

COMPUTER SCIENCE

Paper : COMP 301

[CBCS]

Full Marks : 40

Time : Two Hours

The figures in the margin indicate full marks.

Answer Group - A and any *three* from Group - B.

Group - A

1. Answer any *five* questions : 2×5=10
- (a) What is the difference between training set and test set?
 - (b) What is scatter matrix?
 - (c) Discuss the role of kernel in SVM?
 - (d) How can we determine appropriate value of k in KNN algorithm?
 - (e) What is the purpose of threshold function?
 - (f) What is hierarchical clustering?
 - (g) What do you understand by feature?

Group - B

2. What is clustering? Discuss K-means clustering algorithm. What are the advantages and disadvantages of K-means clustering algorithm? 2+5+3
3. What is supervised learning? Discuss Decision tree classifier. What are the advantages and limitations of this classifier? 2+5+3

4. (a) Discuss SVM classifier. What is the difference between linear and non linear SVM? 4+3+3
- (b) What do you understand by model evaluation? 4+3+3
5. What is Perceptron? What is the limitation of Perceptron? Discuss with an example. What is multilayer Perceptron? 3+4+3
6. Write short note on following (any *two*) : 5×2=10
- (a) Linear Regression
 - (b) Linear Feature Extraction
 - (c) Davies-Bouldin index
 - (d) AUROC
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